

**HETEROJUNCTION TUNNELING DIODE
AND PROCESS FOR FABRICATING THE SAME**

5

Abstract of the Disclosure

High quality epitaxial layers of compound semiconductor materials can be grown overlying large silicon wafers by first growing an accommodating buffer layer on a silicon wafer. The accommodating buffer layer is a layer of monocrystalline oxide spaced apart from the silicon wafer by an amorphous interface layer of silicon oxide. The amorphous interface layer dissipates strain and permits the growth of a high quality monocrystalline oxide accommodating buffer layer. Any lattice mismatch between the accommodating buffer layer and the underlying silicon substrate is taken care of by the amorphous interface layer.

20

004454-0240
004454-0240